**Eureka Math *A Story of Units***

**Fifth Grade – Module 5**

**2015-2016**

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Assessment based on Version 3. (No changes from Version 2.)

**Module Assessment Overview**

**Purpose of Assessments**

**Mid-Module Assessment:** These tasks address approximately the **first half** of the module’s learning objectives, and provide important information for instruction and for grading.

**End-of-Module Assessment:** These tasks are based on all standards addressed in order to gauge students’ full range of understanding of the **module as a whole**. The End-of-Module assessment should carry more weight than the Mid-Module Assessment in terms of student grades in the appropriate domain.

**Administration of Assessments**

* Mid- and End-of-Module Assessments are designed to be completed in approximately one class period. However, The tests can be given over multiple days as needed.
* Assessments are designed to be completed independently by students, without assistance.
* These tasks should not be preceded by review of similar problems.

**Grading Guidance**

The grading scale on Elementary Report Cards has been changed for 2015-2016 and beyond. Please note that ***4 now indicates advanced understanding of grade level standards expected at this time of year.***

**4 – Advanced:** Student demonstrates advanced understanding of grade level standards expected at this time of year.

**3 – Proficient:** Student demonstrates proficiency with grade level standards expected at this time of year*.*

**2 – Basic:** Student demonstrates basic understanding of grade level standards expected at this time of year. Student needs additional support and practice.

**1 – Below Basic:** Student demonstrates minimal understanding of grade level standards expected at this time of year. Student needs significant support and practice.

**Rubrics have been updated to reflect this change. Rubrics have been further modified from Eureka Math originals for clarity, accuracy, and alignment to Bethel’s grade scale.**

**General Grading Guidance:**

* On the report card, student learning is reported by CCSS domain. The Fifth Grade CCSS domains are: Operations and Algebraic Thinking, Number and Operations in Base Ten, Number and Operations – Fractions, Measurement and Data, and Geometry.
* Grades in each domain should be based on multiple sources of evidence, including the Mid- and End-of-Module Assessments. The End-of-Module assessment should carry more weight than the Mid-Module Assessment in terms of student grades in the appropriate domain.

**Module 5 Grading Guidance:**

* The standards taught and assessed in Module 5 are only taught and assessed in this module. (See checklist on page 5.)

**Note: When working with measurement, it is crucial that students include the correct measurements to differentiate between linear measurements, area, and volume. On many of the items on Module 5 assessments, students cannot earn full credit without correct labels.**

**Grade 5 Common Core State Standards Checklist by Module**

This grade-level chart provides an at-a-glance view of when each standard is addressed. **Shaded boxes indicate standards assessed in Module 5.** *Note that standards included in major clusters are followed by an asterisk (\*)*. Please refer to the Curriculum Overview of *A Story of Units* for a curriculum map and detailed grade-level descriptions including a summary of the year, a rationale of the module sequence, and a standards alignment chart.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| CCSS | | GRADE 5 MODULES | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 |
| 5.OA | 1 |  | X |  | X |  |  |
| 2 |  | X |  | X |  | X |
| 3 |  |  |  |  |  | X |
| 5.NBT | 1\* | X | X |  |  |  |  |
| 2\* | X | X |  |  |  |  |
| 3a\* | X |  |  |  |  |  |
| 3b\* | X |  |  |  |  |  |
| 4\* | X |  |  |  |  |  |
| 5\* |  | X |  |  |  |  |
| 6\* |  | X |  |  |  |  |
| 7\* | X | X |  | X |  |  |
| 5.NF | 1\* |  |  | X |  |  |  |
| 2\* |  |  | X |  |  |  |
| 3\* |  |  |  | X |  |  |
| 4a\* |  |  |  | X |  |  |
| 4b\* |  |  |  |  | X |  |
| 5a\* |  |  |  | X |  |  |
| 5b\* |  |  |  | X |  |  |
| 6\* |  |  |  | X |  |  |
| 7a\* |  |  |  | X |  |  |
| 7b\* |  |  |  | X |  |  |
| 7c\* |  |  |  | X |  |  |
| 5.MD | 1 | X | X |  | X |  |  |
| 2 |  |  |  | X |  |  |
| 3a\* |  |  |  |  | X |  |
| 3b\* |  |  |  |  | X |  |
| 4\* |  |  |  |  | X |  |
| 5a\* |  |  |  |  | X |  |
| 5b\* |  |  |  |  | X |  |
| 5c\* |  |  |  |  | X |  |
| 5.G | 1 |  |  |  |  |  | X |
| 2 |  |  |  |  |  | X |
| 3 |  |  |  |  | X |  |
| 4 |  |  |  |  | X |  |

**Fifth Grade Module 5: Mid-Module Assessment Task Score Sheet**

A Progression of Learning

A Progression of Learning is provided to describe steps that illuminate the gradually increasing understandings that students develop *on their way to proficiency.* In this chart, this progress is presented from left to right.  The learning goal for each student is to move to the last step, “Evidence of solid reasoning with a correct answer”.  These steps are meant to help teachers and students identify and celebrate what the student CAN do now, and what they need to work on next.

| Score Key: A Progression of Learning | | | |
| --- | --- | --- | --- |
| Little or no evidence of reasoning with an incorrect answer.  (1 Point) | Evidence of some reasoning with an incorrect answer.  (2 Points) | Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.  (3 Points) | Evidence of solid reasoning with a correct answer.  (4 Points) |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Module 5 Mid-Module Assessment** | | | | | | |
| **Domain** | | **Standards** | | | | |
| Question | Measurement and Data | | 5.MD.3 | 5.MD.4 | 5.MD.5a | 5.MD.5b | 5.MD.5c |
| 1 | 1 2 3 4 | | X | X |  |  |  |
| 2 | 1 2 3 4 | |  |  | X | X |  |
| 3 | 1 2 3 | |  |  | X |  |  |
| 4 | 1 2 3 4 | |  |  | X | X | X |
| 5 | 1 2 3 | |  |  |  |  | X |
| 6 | 1 2 3 4 | |  |  |  | X |  |
| 7 | 1 2 3 4 | | X |  |  |  |  |
|  | | |  | | | | |
| Domain  Score | Measurement and Data | |  | | | | |  |
| Total Points |  | |
| Level | 4 | 25-26 points |
| 3 | 18-24 points |
| 2 | 11-17 points |
| 1 | 7-10 points |

Note: For more information about standards assessed in this module, see back of this score sheet.

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Notes:

**Fifth Grade Module 5: Mid-Module Assessment Task Score Sheet (continued)**

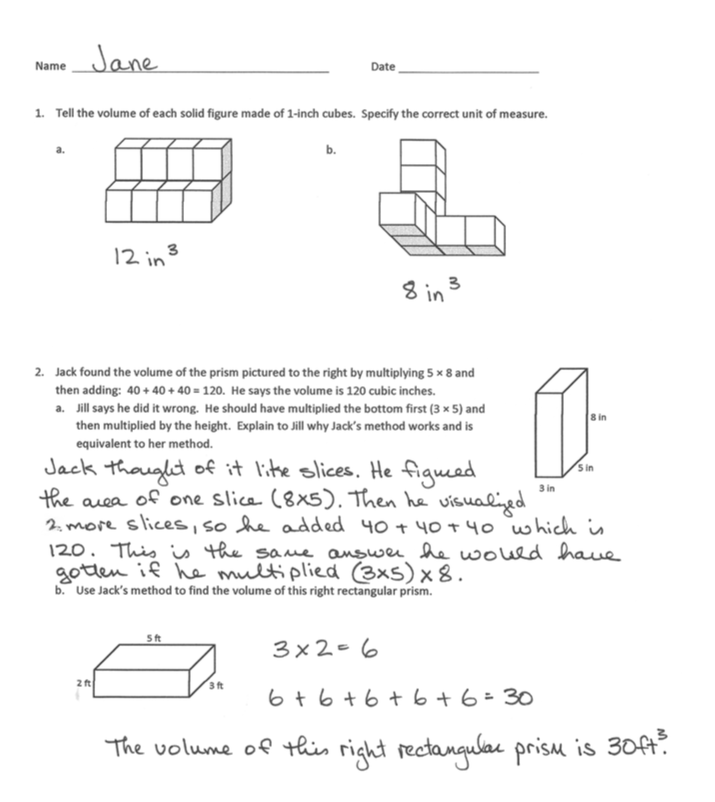
|  |
| --- |
| Mid-Module Assessment Task (Topics A–B)  Clusters and Standards Addressed |
| Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.  5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.  a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.  b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.  5.MD.4 Measure volumes by counting unit cubes, using cubic cm, cubic in, cubic ft, and improvised units.  5.MD.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.  a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.  b. Apply the formulas *V* = *l* × *w* × *h*  and *V* = *b* × *h* for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.  c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems. |

**Fifth Grade Module 5: Mid-Module Assessment Task Rubric**

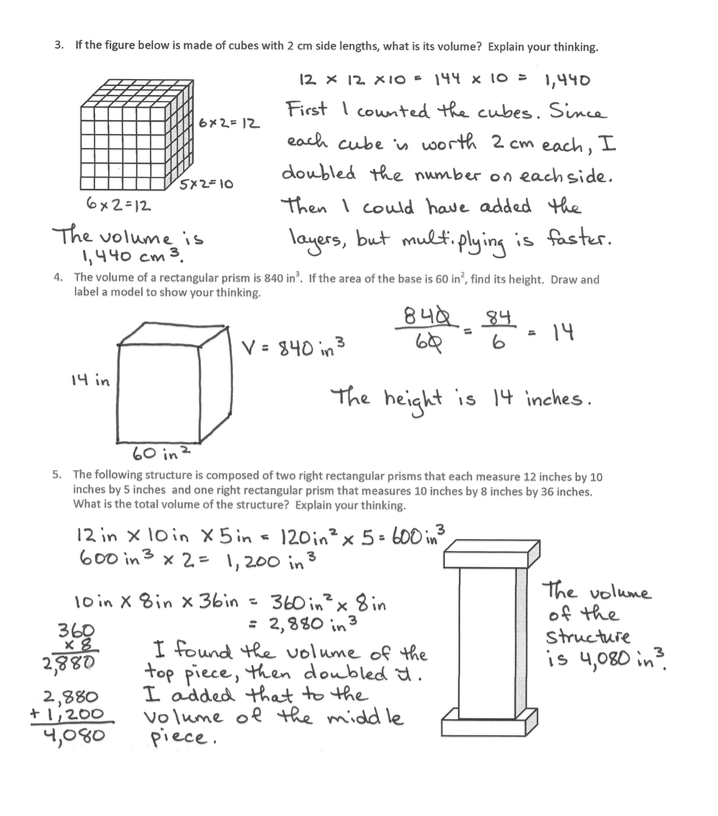
| A Progression of Learning | | | | | |
| --- | --- | --- | --- | --- | --- |
| Assessment  Task Item  and  Standards Assessed | STEP 1  Little or no evidence of reasoning with an incorrect answer.  (1 Point) | | STEP 2  Evidence of some reasoning with an incorrect answer  (2 Points) | STEP 3  Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.  (3 Points) | STEP 4  Evidence of solid reasoning with a correct answer.  (4 Points) |
| **1**  5.MD.3  5.MD.4 | The student correctly answers **0-1** of the four parts. | | The student correctly answers **2** of the four parts. | The student correctly answers **3** of the four parts. | The student correctly finds and labels the volume for **4** of the four parts. (See below.) |
| a. **(1)** 12 **(2)** in3  b. **(3)** 8 **(4)** in3 | | | | |
| **2**  5.MD.5a  5.MD.5b | The student is unable to answer any parts correctly. | The student correctly answers **1-2** of the three parts. | | The student correctly answers parts (1) and (3), and calculates the volume of the prism in part (2) but does NOT use Jack’s method. | The student correctly answers **3** of the three parts. (See below.) |
| a. **(1)** Explains the equivalence between the two approaches by explaining the sides may be multiplied in any order because any face can be used as the base of the figure.  b. **(2)** Uses Jack’s method to correctly calculate the volume of the prism as (3 × 2) × 5 = 30 ft3. **(3)** Labels volume with cubic feet. | | | | |
| **3**  5.MD.5a | The student correctly answers **0** of the three parts. | The student correctly answers **1** of the three parts. | | The student correctly answers **3** of the three parts. (See below.) | No level 4 available for this item. |
| **(1)** Answers 1,440  **(2)** Labels volume using cubic cm (cm3)  **(3)** Explains the reasoning used (words, pictures, or numbers) | | | | |
| **4**  5.MD.5 | The student correctly answers **0-1** of the four parts. | The student correctly answers **2** of the four parts. | | The student correctly answers **3** of the four parts. | The student correctly answers **4** of the four parts. (See below.) |
| **(1)** Draws a three-dimensional rectangular prism as a model.  **(2)** Labels the model, **(3)** including inches for height and inches squared for the base.  **(4)** Calculates the height of the prism as 14 in. | | | | |

| A Progression of Learning | | | | | |
| --- | --- | --- | --- | --- | --- |
| Assessment  Task Item  and  Standards Assessed | STEP 1  Little or no evidence of reasoning with an incorrect answer.  (1 Point) | | STEP 2  Evidence of some reasoning with an incorrect answer  (2 Points) | STEP 3  Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.  (3 Points) | STEP 4  Evidence of solid reasoning with a correct answer.  (4 Points) |
| 5  5.MD.5c | The student correctly answers **0-1** of the three parts. | The student correctly answers **2** of the three parts. | | The student correctly answers **3** of the three parts. (See below.) | No level 4 available for this item. |
| **(1)** Calculates the volume of the prism as 4,080.  **(2)** Labels volume using cubic cm (in3).  **(3)** Explains the reasoning used. | | | | |
| **6**  5.MD.5b | The student correctly answers **0-2** of the six parts. | The student correctly answers **3-4** of the six parts. | | The student correctly answers **5** of the six parts. | The student correctly answers **6** of the six parts. (See below.) |
| a. **(1)** Calculates 9,000 cm3, **(2)** labels volume with cubic cm, and **(3)** explains the reasoning used.  b. **(4)** Calculates 18 cm, **(5)** labels height in cm, and **(6)** shows correct work/reasoning. | | | | |
| **7**  5.MD.3 | The student correctly answers **0** of the three parts. | The student correctly answers **1** of the three parts. | | The student correctly answers **2** of the three parts.  OR  The student makes an error reading the scale on the beaker and answers parts 2 and 3 correctly based on the scale error. | The student correctly answers **3** of the three parts. (See below.) |
| **(1)** Clearly explains a method for determining if the contents will fit without pouring—2,400 mL = 2,400 cm3.  **(2)** Correctly answers that the broth will not fit.  **(3)** Correctly answers that Juliet will have 300 more mL (or 300 cm3), or 0.3 L, of broth that won’t fit in the storage container. | | | | |

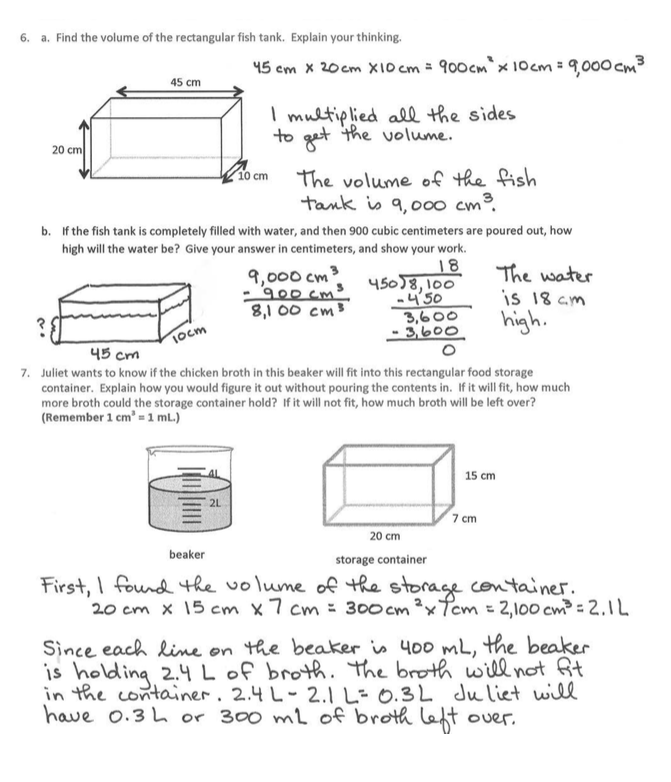
**Fifth Grade Module 5: Mid-Module Assessment Task Key**

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**Fifth Grade Module 5: Mid-Module Assessment Task Key (continued)**

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**Fifth Grade Module 5: Mid-Module Assessment Task Key (continued)**

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**Fifth Grade Module 5: End-of-Module Assessment Task Score Sheet**

A Progression of Learning

A Progression of Learning is provided to describe steps that illuminate the gradually increasing understandings that students develop *on their way to proficiency.* In this chart, this progress is presented from left to right.  The learning goal for each student is to move to the last step, “Evidence of solid reasoning with a correct answer”.  These steps are meant to help teachers and students identify and celebrate what the student CAN do now, and what they need to work on next.

| Score Key: A Progression of Learning | | | |
| --- | --- | --- | --- |
| Little or no evidence of reasoning with an incorrect answer.  (1 Point) | Evidence of some reasoning with an incorrect answer.  (2 Points) | Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.  (3 Points) | Evidence of solid reasoning with a correct answer.  (4 Points) |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Module 5 End-of-Module Assessment** | | | | | | | | | | | | |
| **Domain** | | | | | | | **Standards** | | | | | |
| Question | Number and Operations – Fractions | | Measurement and Data | | | Geometry | | 5.NF.4b | 5.NF.6 | 5.MD.3 | 5.MD.5 | 5.G.3 | 5.G.4 |
| 1 | 1 2 3 4 | |  | | |  | | X |  |  |  |  |  |
| 2 | 1 2 3 4 | |  | | |  | | X | X |  |  |  |  |
| 3 |  | | 1 2 3 4 | | |  | |  |  | X | X |  |  |
| 4 | 1 2 3 4 | |  | | |  | | X | X |  |  |  |  |
| 5 |  | | 1 2 3 4 | | |  | |  |  |  | X |  |  |
| 6 |  | |  | | | 1 2 3 4 | |  |  |  |  | X | X |
|  | | | | |  | | |  | | | | | |
| Domain  Score | Number and Operations – Fractions | | Measurement and Data | | | Geometry | | Note: For more information about standards assessed in this module, see back of this score sheet. | | | | | |
| Total Points |  | |  | | |  | |
| Level | 4 | 11-12 pts | 4 | 7-8 pts. | | 4 | 4 pts. |
| 3 | 8-10 pts. | 3 | 5-6 pts. | | 3 | 3 pts. |
| 2 | 5-7 pts. | 2 | 3-4 pts. | | 2 | 2 pts. |
| 1 | 3-4 pts. | 1 | 2 pts. | | 1 | 1 pts. |

Notes:

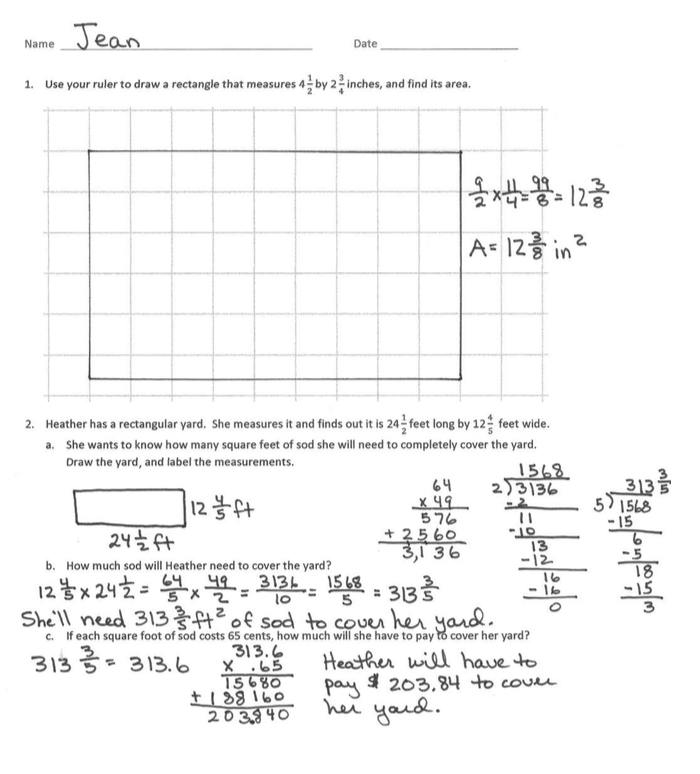
**Fifth Grade Module 5: End-of-Module Assessment Task Score Sheet (continued)**

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| --- |
| End-of-Module Assessment Task (Topics A–D)  Clusters and Standards Addressed |
| Apply and extend previous understandings of multiplication and division to multiply and divide fractions.  5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.  b. Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiply fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.  5.NF.6 Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.  Geometric measurement: understand concepts of volume and relate volume to multiplication and to addition.  5.MD.3 Recognize volume as an attribute of solid figures and understand concepts of volume measurement.  a. A cube with side length 1 unit, called a “unit cube,” is said to have “one cubic unit” of volume, and can be used to measure volume.  b. A solid figure which can be packed without gaps or overlaps using *n* unit cubes is said to have a volume of *n* cubic units.  5.MD.5 Relate volume to the operations of multiplication and addition and solve real world and mathematical problems involving volume.  a. Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes, and show that the volume is the same as would be found by multiplying the edge lengths, equivalently by multiplying the height by the area of the base. Represent threefold whole-number products as volumes, e.g., to represent the associative property of multiplication.  b. Apply the formulas *V* = *l* × *w* × *h*  and *V* = *b* × *h* for rectangular prisms to find volumes of right rectangular prisms with whole-number edge lengths in the context of solving real world and mathematical problems.  c. Recognize volume as additive. Find volumes of solid figures composed of two non-overlapping right rectangular prisms by adding the volumes of the non-overlapping parts, applying this technique to solve real world problems.  Classify two-dimensional figures into categories based on their properties.  5.G.3 Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category.  *For example, all rectangles have four right angles and squares are rectangles, so all squares have four right angles.*  5.G.4 Classify two-dimensional figures in a hierarchy based on properties. |

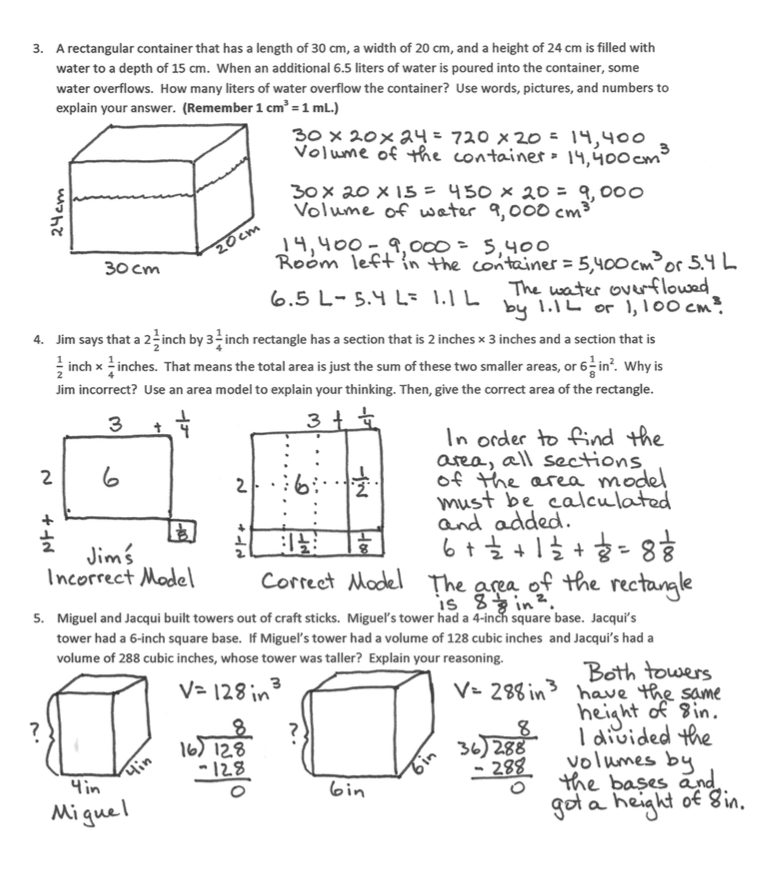
**Fifth Grade Module 5: End-of-Module Assessment Task Rubric**

| A Progression of Learning | | | | |
| --- | --- | --- | --- | --- |
| Assessment  Task Item  and  Standards Assessed | STEP 1  Little or no evidence of reasoning with an incorrect answer.  (1 Point) | STEP 2  Evidence of some reasoning with an incorrect answer.  (2 Points) | STEP 3  Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.  (3 Points) | STEP 4  Evidence of solid reasoning with a correct answer.  (4 Points) |
| **1**  5.NF.4b | The student is unable to draw the rectangle and unable to find the area. | The student correctly answers **1-2** of the three parts. | The student correctly answers parts 1 & 2, but does not use appropriate units for part 3. | The student correctly answers **3** of the three parts. (See below.) |
| 1. Draws the rectangle. 2. Calculates the area as 3. Labels area with square inches. | | | |
| **2**  5.NF.4b  5.NF.6 | The student correctly answers **0-1** of the five parts. | The student correctly answers **2-3** of the five parts. | The student correctly answers **4** of the five parts. | The student correctly answers **5** of the five parts. (See below.) |
| a. **(1)** Draws the yard and **(2)** labels correctly with the length as ft and the width as 12 ft.  b. **(3)** Calculates the area of the yard using **(4)** appropriate units as 313 ft2 or 313 ft2.  c. **(5)** Finds the cost of the sod to be $203.84. | | | |
| **3**  5.MD.3  5.MD.5 | The student correctly answers **0-1** of the four parts. | The student correctly answers **2** of the four parts. | The student correctly answers **3** of the four parts. | The student correctly answers **4** of the four parts. (See below.) |
| 1. Finds volume of container (14,400 cubic cm) 2. Finds volume of water in container (9,000 cubic cm) 3. Finds difference between remaining volume in the container and the amount of water added. (1.1L) 4. Uses words, numbers, and pictures to explain answer. | | | |
| **4**  5.NF.4b  5.NF.6 | The student correctly answers **0-1** of the four parts. | The student correctly answers **2** of the four parts. | The student correctly answers **3** of the four parts. | The student correctly answers **4** of the four parts. (See below.) |
| 1. Accurately partitions the area model in both dimensions. 2. Provides a clear explanation of Jim’s error. 3. Calculates the correct area of the rectangle as 8 1/8. 4. Labels area as in2 | | | |
| Assessment  Task Item  and  Standards Assessed | STEP 1  Little or no evidence of reasoning with an incorrect answer.  (1 Point) | STEP 2  Evidence of some reasoning with an incorrect answer.  (2 Points) | STEP 3  Evidence of some reasoning with a correct answer or evidence of solid reasoning with an incorrect answer.  (3 Points) | STEP 4  Evidence of solid reasoning with a correct answer.  (4 Points) |
| **5**  5.MD.5 | The student correctly answers **0-1** of the four parts. | The student correctly answers **2** of the four parts. | The student correctly answers **3** of the four parts. | The student correctly answers **4** of the four parts. (See below.) |
| **(1-2)** Calculates the height of both towers (8 inches).  **(3)** Labels heights in inches.  **(4)** Explains that the towers are equal in height. | | | |
| **6**  5.G.3  5.G.4 | The student correctly answers **0-6** of the fourteen parts. | The student correctly answers **7-11** of the fourteen parts. | The student correctly answers **12-13** of the fourteen parts. | The student correctly answers **14** of the fourteen parts. (See below.) |
| a. **(1)** True **(2)** explanation b. **(3)** True **(4)** explanation c. **(5)** False **(6)** explanation  d. **(7)** True **(8)** explanation e. **(9)** False **(10)** explanation f. **(11)** False **(12)** explanation  g. **(13)** False **(14)** explanation | | | |

**Fifth Grade Module 5: End-of-Module Assessment Task Key**



**Fifth Grade Module 5: End-of-Module Assessment Task Key (continued)**



**Fifth Grade Module 5: End-of-Module Assessment Task Key (continued)**

